REMARKS

Introduction

Status of claims

Claims 1 and 3 to 10 are currently pending in this application.

Claims 1 to 5 have been elected following a restriction requirement which has now been made final.

Claims 6 to 10 have been withdrawn.

Claims 1, and 3 to 5 have been currently amended.

Claim 1 has been amended by incorporating the subject matter of original claim 2, and the limitations for the mass fractions of components **A1** to **A4** used for making the polyester **A** of original claim 3.

Claim 3 has been amended by being directed to the narrower set of limits for mass fractions of components **A1** to **A4** used for making the polyester **A** as disclosed in page 2, first full paragraph starting with "The polyester resins **A** ...", last sentence.

Claims 1 and 3 to 5 have also been amended by putting the correct spelling of "polyester urethane", and by replacing "characterised in that " by "wherein".

It is deemed that no new matter has been added by such amendments. It is also deemed that no further search or consideration will be necessitated by these amendments, and entry thereof is therefore respectfully requested.

The Office Action

Rejection under 35 U. S. C. 102 (b)

Claims 1 and 4 to 5 of the present application stand rejected under 35 U. S. C. § 102 (b) over Blum US 6,541,535 B1.

Blum is based on the priority application DE 198 35 849 A1 which has been discussed in the introductory portion of the present specification. The resins described therein are used for powder coating applications. These resins even if diluted with reactive diluents cannot be used for application from solution because of their high viscosity, and the propensity to embrittlement if the amount of reactive diluent is raised so as to bring the viscosity down to a tolerable level for solution application.

In the present invention, it has been found that addition of fatty acids having from 6 to 30 carbon atoms and which may optionally be unsaturated, in a mass fraction of from 15 % to 60 % in the condensation mixture for preparation of the polyester **A**, leads to polyester urethane resins which have the desired lower viscosity.

Among the suitable carboxylic acids, there are mentioned those having two or more carboxyl groups, see col. 5, lines 53 to 56. There is no disclosure or suggestion in Blum that a certain amount of fatty acids, viz. a mass fraction of from 15 % to 60 %, and use of a combination of dihydric aliphatic alcohols **A1** and trihydric or more than trihydric aliphatic alcohols **A2** will reduce the viscosity of polyester urethane acrylates to a level where spraying or rolling onto metal substrates at high coating

speeds would be feasible. See page, 1, second and third paragraphs starting with "Radiation-curable resins ...".

Using the stated amount of fatty acids in the condensation mixture for preparation of the unsaturated polyester urethane has not been known from Blum. Choice of this range of amounts of fatty acids **A4** and a combination of dihydric aliphatic alcohols **A1** and trihydric or more than trihydric aliphatic alcohols **A2** is also a purposive selection, in that due to the particular choice, the desired properties for the viscosity of the resulting resin have been obtained. In the Blum reference, neither of these measures is disclosed.

For this reason, claim 1 is not anticipated by Blum, and neither are claims 3 and 4 and 5 anticipated, which depend on claim 1 and add more restrictions to the subject matter. Withdrawal of this reason of rejection is therefore respectfully solicited.

Rejection under 35 U. S. C. 103 (a)

Claims 3 to 5 stand rejected under 35 U. S. C. 103 (a) as rendered obvious by Blum.

This rejection is respectfully traversed.

Blum discloses a binder for powder coating materials which comprises a terminal or later vinyl ether group, and at least one co-reactive group, curable thermally or by high-power radiation. See the abstract.

The problem to be solved in the present invention was to provide a radiation curable coating composition that can be applied in the liquid state, by spraying, or rolling, to the surface of a substrate. This problem was solved by adding to the

reaction mixture for condensation polymerization to build the polyester **A**, this claimed range of mass fractions of fatty acids **A4**, and by using a combination of dihydric aliphatic alcohols **A1** and trihydric or more than trihydric aliphatic alcohols **A2**. Unexpectedly, it has also been found that this choice does not only lead to the desired range of viscosity which allows application from the liquid state, in contrast to application as a powder as taught by Blum, but also the adhesion to metal substrates was found to be markedly improved. See the third paragraph on page 1 of the specification, starting with "In the experiments ...".

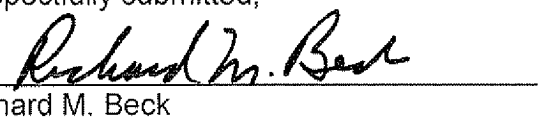
This improved adhesion was shown in the examples, where the so-called T-bend according to ASTM D 4145 was determined. The most demanding test is the T0 test where a strip of metal was bent by 180°, the metal layers lying directly on one another, and the metal strip coated with the coating composition according to the invention showed no cracks and no loss of adhesion there. This could not have been expected by a person skilled in the art, judging from Blum.

There is no teaching, suggestion or motivation in Blum to modify the composition of the polyester accordingly, and thereby obtain a binder with the properties as shown.

Conclusion

Applicants therefore deem that the subject matter as now claimed in amended claims 1, 3, 4 and 5 is neither anticipated by, nor obvious over, the cited state of the art, and favorable reconsideration is respectfully requested.

Respectfully submitted,

By 

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